Amendment to the Specification

Replace paragraph **[0030],** p. 9 with the following:

A further embodiment of a system of this invention is shown in Figure 3. Referring to Fig. 3, the system 100 includes a pair of separating diffraction gratings 120, 130, a directing optical element 140, such as, but not limited to, a polarizing beamsplitter with a quarter wave plate, a redirecting optical element 160, such as, but not limited to, the same polarizing beamsplitter used in the directing optical element 140 with another waveplate used to re-rotate the polarization state of the light, a volume optical reflector 150, a switchable optical element 180, optical means for focusing distinct chromatic components 125, 135 onto the switchable optical element 180, and a pair of recombining diffraction gratings 190, 200.

Replace paragraph **[0031],** p. 9 with the following:

During operation, input optical radiation 110, from an input beam/port 115, is separated into m distinct chromatic components, labeled 125 through 135, by fixed grating 120. The distinct chromatic components 125, 135 are directed towards directing optical element 140. Directing optical element 140 directs the distinct chromatic components 125, 135 towards an optical reflector 150, a tilted holographic mirror in one embodiment. When a polarizing beamsplitter (PBS) is used in the directing optical element 140, the distinct chromatic components 125, 135 will be linearly polarized, transmitted through the PBS, through the waveplate, and as incident on the tilted holographic mirror will be circularly polarized. It should noted that an array of Faraday rotators or circulators may also be utilized as components of the directing optical element 140. If an array of circulators is used, other polarization states or unpolarized light may be used in the channels.

Replace paragraph **[0034],** p. 10 with the following:

Figure 4 depicts a switching and/or routing system 100 of this invention incorporating electrically switchable diffractive gratings, such as those disclosed in U.S. Patent Ser. No. 5,771,320, as an embodiment of the switchable optical element 180 of Fig. 3. In one

embodiment, the array of m 1xN switches 300 shown in Fig. 4 is the front half of the MxN cross connect as described in U.S. Patent Ser. No. 5,771,320. In another embodiment, the array of m 1xN switches 300 comprises a compact planar switched grating array as described in U.S. Patent Application Ser. No. 10/700,828, filed on November 4, 2003, which is hereby incorporated by reference. During operation, input optical radiation 110 is separated into m distinct chromatic components, labeled 125 through 135, by fixed grating 120. The distinct chromatic components 125, 135 are directed towards directing optical element 140. Directing optical element 140 directs the distinct chromatic components 125, 135 towards an optical reflector 150. The distinct chromatic components 125, 135 are reflected by the optical reflector 150. The reflected distinct chromatic components 125, 135 are redirected towards an array of m 1xN switches 300 by redirecting optical element 160. The distinct chromatic components 125, 135 are then passed through the array of m 1xN switches 300 as shown. Each of the m input channels 125 through 135 is independently routed to any of N output columns 310 through 320. The recombining grating pair 190 and 200 combines any chromatic components present in a given column into one element of an array of N multiplexed output channels as shown in Figure 4. Each of m chromatic components, 125 through 135, in the input can be independently routed to any of N output ports, 230 trough 240. Similarly, a lens 67 or other lenses as described earlier may be used to focus or collimate the chromatic components onto the tilted volume mirror and/or throughout the system.